AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims in the above-referenced application:

1. (Currently amended) A Boundary-Scan test receiver for capturing signals during board interconnect testing, comprising:

a) a comparator comprising a first input to receive said signals during board interconnect testing, ~~and~~ a second input to receive a reference voltage, and an output; and

b) a programmable hyteresis circuit coupled to at least one of said comparator inputs and the output, wherein a portion of the programmable hysteresis circuit coupled to the output is configured to receive multiple input control signals responsive to a condition on the board under test.

2. (Original) The Boundary-Scan test receiver of claim 1, wherein the programmable hysteresis circuit comprises a programmable hysteresis voltage generator.

3. (Original) The Boundary-Scan test receiver of claim 2, wherein the programmable hysteresis voltage generator comprises a current digital-to-analog converter to sink current from one of the said first and second inputs.

4. (Original) The Boundary-Scan test receiver of claim 1, wherein the programmable hysteresis circuit comprises a programmable hysteresis delay circuit.

5. (Original) The Boundary-Scan test receiver of claim 4, wherein the programmable hysteresis circuit delay circuit comprises a digital-to-analog converter driving a plurality of variable capacitances, the capacitances being coupled at various points along a chain of buffer elements.

6. (Original) The Boundary-Scan test receiver of claim 4, wherein the programmable hysteresis circuit delay circuit comprises a digital-to-analog converter driving a chain of switchable delay elements.

7. (Original) The Boundary-Scan test receiver of claim 1, wherein programmable inputs of the hysteresis circuit are linked in a scan chain.

8. (Currently amended) A Boundary-Scan test receiver for capturing signals during board interconnect testing, comprising:

a) a plurality of comparators, each comprising a first input to receive said signals during board interconnect testing, ~~and~~ a second input to receive a reference voltage and an output; and

b) a programmable hysteresis circuit coupled to at least one input and the output of each comparator, wherein a portion of the programmable hysteresis circuit coupled to the output is configured to receive multiple input control signals responsive to a condition on the board under test.

9. (Original) The Boundary-Scan test receiver of claim 8, wherein the programmable hysteresis circuit comprises a programmable hysteresis voltage generator; the programmable hysteresis voltage generator comprising:

a) a voltage divider, coupled between an input of each comparator;

b) a current digital-to-analog converter driving the voltage divider; and

c) a current mirror, coupled to a midpoint of the voltage divider to mirror a reference voltage at said midpoint.

10. (Original) The Boundary-Scan test receiver of claim 8, wherein the programmable hysteresis circuit comprises a programmable hysteresis voltage generator; the programmable hysteresis voltage generator comprising:

a) a voltage divider, coupled between an input of each comparator;

b) a current digital-to-analog converter driving the voltage divider; and

c) a current mirror, coupled to a midpoint of the voltage divider to mirror a common mode voltage of said signals at said midpoint.

11. (Currently amended) A Boundary-Scan test method, comprising:

a) determining at least one operating condition of a board under test;

b) in response to said ~~determined~~ at least one operating ~~conditions~~ condition, programming hysteresis circuits of Boundary-Scan test receivers in the board under test, wherein programming comprises the application of at least one of a data input signal, a first control signal that determines an active path through the programmable hysteresis circuit, a second control signal that directs operation of a data capture device, and a third control signal that directs operation of an update device; and

c) executing a Boundary-Scan test.

12. (Original) The BoundarScan test method of claim 11, wherein determining the at least one operating condition comprises determining a signaling level of a component of the board under test.

13. (Original) The Boundary-Scan test method of claim 11, wherein determining the at least one operating condition comprises determining a noise level associated with signal paths of the board under test.

14. (Original) The Boundary-Scan test method of claim 13, further comprising, prior to determining the at least one operating condition:

a) programming hysteresis circuits of the Boundary-Scan test receivers with default values; and

b) executing a Boundary-Scan test; wherein determining the noise level associated with signal paths of the board under test comprises evaluating results of the Boundary-Scan test ran with the default values.

15. (Original) The Boundary-Scan test method of claim 11, further comprising, prior to determining the at least one operating condition:

a) programming hysteresis circuits of the Boundary-Scan test receivers with default values; and

b) executing a Boundary-Scan test; wherein determining the at least one operating condition of the board under test comprises evaluating results of the Boundary-Scan test ran with the default values.

16. (Original) The Boundary-Scan test method of claim 11, wherein programming the hysteresis circuits comprises programming a hysteresis voltage.

17. (Original) The Boundary-Scan test method of claim 11, wherein programming the hysteresis circuits comprises programming a hysteresis delay.

18. (Original) The Boundary-Scan test method of claim 11, wherein the hysteresis circuits of a component of a board under test are programmed via bits shifted through a scan chain.

19. (Original) The Boundary-Scan test method of claim 11, wherein the hysteresis circuits of a component of a board under test are programmed in a plurality of sets.

20. (New) The Boundary-Scan test receiver of claim 1, wherein the programmable hysteresis circuit receives a data input signal, a first control signal that determines an active path through the programmable hysteresis circuit, a second control signal that directs operation of a data capture device, and a third control signal that directs operation of an update device.